Amendments to the Claims

- 1. (Original) A probe for detecting an agonist or an antagonist to a nuclear receptor, in which, at least, a ligand-recognition site containing a ligand-binding domain of the nuclear receptor is connected with a binding-responsive site containing a peptide chain that specifically binds to a coactivator-binding site in the ligand-binding domain by a flexible linker to construct a fusion structure [ligand-recognition site/linker/binding-responsive site], and two reporters are connected with the respective ends of the fusion structure.
- **2.** (**Original**) The probe of claim 1, wherein the ligand-recognition site contains a ligand-binding domain of a nuclear receptor selected from the group including glucocorticoid receptor, estrogen receptor, progesterone receptor, peroxisome proliferator-activated receptor, androgen receptor, thyroid gland hormone receptor, retinoic acid receptor, vitamin D receptor and orphan receptors.
- 3. (Original) The probe of claim 1, wherein the ligand-recognition site is an estrogen receptor α ligand-binding domain, a peroxisome growth factor activation receptor ligand-binding domain or an androgen receptor ligand-binding domain.
- **4.** (Original) The probe of claim 3, wherein the binding-responsive site is a nuclear receptor interaction domain peptide of steroid receptor coactivator 1.
- **5.** (Original) The probe of claim 3, wherein the binding-responsive site contains the motif of SEQ ID No: 1.
- 6. (Currently amended) The probe of any of claims 1 to 5 claim 1, wherein the two reporters are a yellow fluorescent protein and a cyan fluorescent protein.
- 7. (Currently amended) A method for screening an agonist to nuclear receptor, which comprises making any of the probes a probe of claims 1 to 6 claim 1 coexist with an agonist

candidate substance, and measuring changes in signals with and without the agonist candidate substance.

- **8.** (Original) The method for screening an agonist according to claim 7, wherein the probe coexists with the agonist candidate substance in cells by introducing a polynucleotide expressing the probe into the cells.
- **9.** (Original) The method for screening an agonist according to claim 7, wherein the probe coexists with the agonist candidate substance in all cells of a non-human animal or its progeny by introducing a polynucleotide expressing the probe into a non-human animal totipotent cell and developing the cell into a individual animal.
- 10. (Currently amended) A method for screening an antagonist to nuclear receptor, which comprises making any of the probes a probe of claims 1 to 6 claim 1 coexist with an excessive amount of antagonist candidate substance and a known agonist, and measuring changes in a signal with and without the antagonist candidate substance.
- 11. (Original) The method for screening an antagonist according to claim 10, wherein the probe coexists with the agonist and the antagonist candidate substance in cells by introducing a polynucleotide expressing the probe into the cells.
- 12. (Original) The method for detecting an antagonist according to claim 10, wherein the probe coexists with the agonist and the antagonist candidate substance in all cells of a non-human animal or its progeny by introducing a polynucleotide expressing the probe into a non-human animal totipotent cell and developing the cell into an individual animal.
- 13. (Currently amended) A non-human animal or its progeny, which is established by introducing a polynucleotide expressing any of the probes a probe of claims 1 to 6 claim 1 into non-human animal totipotent cell and developing the cell into an individual animal.